What is claimed is:

1. A packaged solid state assembly comprising:

a) a first ceramic substrate and a second ceramic substrate and at least one solid state device located therebetween, each solid state device comprising a body having a coefficient of thermal expansion and a plurality of conductive contacts on a surface of the body facing the second ceramic substrate;

b) the first ceramic substrate comprising:

a body having a coefficient of thermal expansion matched to the coefficient of thermal expansion of at least one solid state device, a lower side and an upper side facing the solid state devices;

a conductive pad covering the lower side; and

one conductive pad connected to each of the solid state devices packaged, each conductive pad being bonded to the upper side of the body and connected to the solid state device with which it is associated, each pad being separated from other metal pads by a distance sufficient to prevent breakdown;

c) a second ceramic substrate comprising:

a body having a coefficient of thermal expansion matched to the coefficient of thermal expansion of at least one solid state device, a lower side facing the solid state devices, and an upper side;

a plurality of conductive pads bonded to the upper side of the body, and

a plurality of conductive pads bonded to the lower side of the body, at least one pad for each contact on the solid state devices, facing the solid state devices and connected to the conductive contacts of the solid state device; and

a plurality of vias connecting at least some of the conductive pads on the lower side of the body to at least one of the conductive pads on the upper side of the body;

d) a plurality of terminals connected to the conductive pads on the upper surface of the second ceramic substrate;

e) a strip line comprising an insulating body, a first conductive strip and a second conductive strip, the first conductive strip being connected to a conductive pad on the first ceramic substrate or the second ceramic substrate, and the second conductive strip being connected to a different conductive pad on the first ceramic substrate or the second ceramic substrate; and

f) a first encapsulant having a coefficient of thermal expansion matched to the coefficient of thermal expansion of at least one solid state device, encapsulating the solid state devices between the first ceramic substrate and the second ceramic substrate.

2. The assembly of claim 1, wherein the first ceramic substrate is made of aluminum nitride.

3. The assembly of claim 1, wherein the second ceramic substrate is made of aluminum oxide.

4. The assembly of claim 1, further comprising a second encapsulant covering all of the assembly except for the lower side of the first ceramic substrate and ends of the terminals opposite the second ceramic substrate.

5. The assembly of claim 1, further comprising a shell covering all of the assembly except for the lower side of the first ceramic substrate and ends of the terminals opposite the second ceramic substrate.

6. The assembly of claim 5, further comprising a second encapsulant inside the shell.

7. The assembly of claim 1, further comprising a heat sink coupled to the lower side of the first ceramic substrate.

8. The assembly of claim 1, further comprising at least one conductor connecting a conductive pad on the first ceramic substrate and a conductive pad on the second ceramic substrate.

9. A package for at least one solid state device, each solid state device comprising a body having a coefficient of thermal expansion and a plurality of conductive contacts, the package comprising:

a) a first ceramic substrate and a second ceramic substrate, spaced apart a sufficient distance for at least one solid state device to be located therebetween, the conductive contacts on the solid state device facing the second ceramic substrate;

b) the first ceramic substrate comprising:

a body having a coefficient of thermal expansion matched to the coefficient of thermal expansion of at least one solid state device, a lower side and an upper side facing the solid state devices;

a conductive pad covering the lower side; and

one conductive pad for each of the solid state devices packaged, each conductive pad being bonded to the upper side of the body and located so as to be adjacent to the solid state device with which it is associated, each pad being separated from other metal pads by a distance sufficient to prevent breakdown;

c) a second ceramic substrate comprising:

a body having a coefficient of thermal expansion matched to the coefficient of thermal expansion of at least one solid state device, a lower side facing the solid state devices and an upper side;

a plurality of conductive pads bonded to the upper side of the body, and

a plurality of conductive pads bonded to the lower side of the body, at least one pad for each contact on the solid state devices, facing the solid state devices and connected to the conductive contacts of the solid state device; and

a plurality of vias connecting at least some of the conductive pads on the lower side of the body to at least one of the conductive pads on the upper side of the body;

d) a plurality of terminals connected to the conductive pads on the upper surface of the second ceramic substrate; and

e) a strip line comprising an insulating body, a first conductive strip and a second conductive strip, the first conductive strip being connected to a conductive pad on the first ceramic substrate or the second ceramic substrate, and the second conductive strip being connected to a different conductive pad on the first ceramic substrate or the second ceramic substrate; and

such that when at least one solid state device is mounted in the package, the space between the first ceramic substrate and the second ceramic substrate is filled with a first encapsulant having a coefficient of thermal expansion matched to the coefficient of thermal expansion of at least one solid state device, encapsulating the solid state devices.

10. The package of claim 9, wherein the second ceramic substrate is made of aluminum oxide.

11. The package of claim 9, wherein the first ceramic substrate is made of aluminum nitride.

12. The package of claim 9, further comprising a second encapsulant covering all of the assembly except for the lower side of the first ceramic substrate and ends of the terminals opposite the second ceramic substrate.

13. The package of claim 9, further comprising a shell covering all of the assembly except for the lower side of the first ceramic substrate and ends of the terminals opposite the second ceramic substrate.

14. The package of claim 13, further comprising a second encapsulant inside the shell.

15. The package of claim 9, further comprising a heat sink coupled to the lower side of the first ceramic substrate.

16. The package of claim 9, further comprising at least one conductor connecting a conductive pad on the first ceramic substrate and a conductive pad on the second ceramic substrate.

17. A method of packaging at least one solid state device, each solid state device comprising a body having a coefficient of thermal expansion and a plurality of conductive contacts, using a first ceramic substrate and a second ceramic substrate; the method comprising the steps of:

a) providing a second ceramic substrate comprising:

a body having a coefficient of thermal expansion matched to the coefficient of thermal expansion of at least one solid state device, a lower side and an upper side;

a plurality of conductive pads bonded to the upper side of the body, and

a plurality of conductive pads bonded to the lower side of the body, at least one pad for each contact on the solid state devices,

a plurality of vias connecting at least some of the conductive pads on the lower side of the body to at least one of the conductive pads on the upper side of the body;

b) placing the solid state devices on the lower side of the second ceramic substrate, with the contacts of the solid state devices in alignment with the conductive pads on the lower side of the second ceramic substrate;

c) connecting the contacts of the solid state device to the conductive pads on the lower side of the second ceramic substrate;

d) assembling the connected solid state devices and second ceramic substrate with a first ceramic substrate comprising:

a body having a coefficient of thermal expansion matched to the coefficient of thermal expansion of at least one solid state device, a lower side and an upper side;

a conductive pad covering the lower side; and

one conductive pad for each of the solid state devices to be packaged, each conductive pad being bonded to the upper side of the body and located adjacent to the solid state device with which it is associated, each pad being separated from other metal pads by a distance sufficient to prevent breakdown;

e) connecting the conductive pads on the upper side of the first ceramic substrate to the solid state devices;

f) connecting a plurality of terminals to the conductive pads on the upper surface of the second ceramic substrate;

g) connecting a strip line comprising an insulating body, a first conductive strip and a second conductive strip, to the conductive pads on the first ceramic substrate and the second ceramic substrate; and

h) filling the space between the first ceramic substrate and the second ceramic substrate with a first encapsulant having a coefficient of thermal expansion matched to the coefficient of thermal expansion of at least one solid state device, encapsulating the solid state devices using a mold.

18. The method of claim 17, in which the filling step (h) encapsulating the solid state device between the two ceramic substrates is done under vacuum using a mold.

19. The method of claim 17, further comprising the step, after step (h) of :

i) encapsulating the assembled upper side of the first ceramic substrate, the second ceramic substrate, solid state devices, strip line, and terminals in a second encapsulant using a mold, leaving the lower side of the first ceramic substrate, an outer portion of each of the terminals and an outer portion of the strip line free of encapsulant.

20. The method of claim 19, in which the encapsulation steps (h) and (i) comprise the steps of:

1) adhering the conductive pad on the lower side of the second conductive pad against a first part of a mold with a removable adhesive;

2) sealing the first part of the mold to a second part of the mold, enclosing the first ceramic substrate, solid state devices, second ceramic substrate, and heat sink within the mold;

3) vacuum filling the mold with the first encapsulant, producing an encapsulated unit with all parts having similar coefficients of thermal expansion;

4) removing the second part of the mold;

5) sealing the first part of the mold against a different second half of the mold;

6) vacuum filling the mold with the second encapsulant forming an encapsulated module; and

7) removing the module from the mold.

21. The method of claim 19, in which the first encapsulant and the second encapsulant are the same, and encapsulation steps (h) and (i) are combined in the steps of:

1) adhering the conductive pad on the lower side of the second conductive pad against a first part of a mold with a removable adhesive;

2) sealing the first part of the mold to a second part of the mold, enclosing the first ceramic substrate, solid state devices, second ceramic substrate, and heat sink within the mold;

3) vacuum filling the mold with the encapsulant, producing an encapsulated unit with all parts having similar coefficients of thermal expansion;

4) removing the module from the mold.

22. The method of claim 17, further comprising the step, after step (h) of covering all of the assembly except for the lower side of the first ceramic substrate and ends of the terminals opposite the second ceramic substrate in a shell.

23. The method of claim 22, further comprising the step of filling the shell with a second encapsulant.

24. The method of claim 17, in which the conductive pads on the first ceramic substrate and the contacts of the solid state device, the terminals and the conductive pads second ceramic, and the conductive strips of the strip-line and the conductive pads on the first ceramic substrate and the second ceramic substrate, are connected by placing a layer of solder between each pad and contact and placing the first

ceramic substrate, second ceramic substrate, solid state devices, terminals and strip line in a re-flow oven to melt the solder.

25. The method of claim 24, further comprising the step of cleaning to remove flux and other debris.

26. The method of claim 24, further comprising the step of controlling temperature and environment at least during steps (a) through (f) to reduce stress.

27. The method of claim 17, further comprising the step of mounting the first ceramic substrate to a heat sink.

28. The method of claim 17, further comprising the step of connecting at least one conductive pad on the first ceramic substrate to at least one conductive pad on the second ceramic substrate.